

LESSON 1

Objective

Understand a 3-digit number in terms of hundreds, tens, and ones.

Common Core State Standards

- **2.NBT.1a** Understand that 100 can be thought of as a bundle of ten tens — called a “hundred.”
- **2.NBT.1b** Understand that the numbers 100, 200, 300, 400, 500, 600, 700, 800, 900 refer to one, two, three, four, five, six, seven, eight, or nine hundreds (and 0 tens and 0 ones).

Number and Operations in Base Ten

Three-Digit Numbers

To work with three-digit numbers and to find three-digit sums, children need to extend their understanding of place value to the hundreds place. They must understand the idea that 10 tens make one hundred, and they should learn to think flexibly about a hundred as either a single entity or ten separate tens, depending on the situation. With this understanding, children are prepared to learn further that a three-digit number can have one, two, three, four, five, six, seven, eight, or nine hundreds.

Try It! Perform the Try It! activity on the next page.

Talk About It

Discuss the Try It! activity.

- **Ask:** How many rods are equal to one flat? How many tens are equal to one hundred? **Say:** 100 can be thought of as a bundle of 10 tens. Write the number 106 and point to the three digits. Discuss how the digits represent the place values on the place-value chart and how the zero in 106 shows that there are no tens.
- **Ask:** If Nate bought a second pack of 10 cards, how many cards would he have? Discuss how another 10 cards would make a total of 116 cards.
- **Ask:** If Nate bought 10 more packs of cards, how many cards would he have? Discuss how another 10 tens would make another hundred, for a total of 216 cards.

Solve It

With children, reread the problem. Have children draw the Base Ten Blocks for 96, for another 10, and for the total, exchanging 10 rods for a flat. Have children write the number sentence for the problem, $96 + 10 = 106$.

More Ideas

For other ways to teach place value in three-digit numbers—

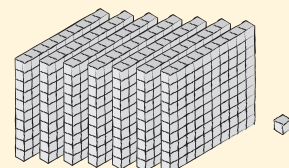
- Have pairs use a spinner to spin 3 numerals. Have them write the three numerals as a three-digit number and build the number using Base Ten Blocks. Have them identify the value of each digit.
- Have children use Base Ten Blocks to build the numbers 100, 200, 300, 400, 500, 600, 700, 800, and 900. Have them explain these numbers as different amounts of hundreds.

Formative Assessment

Have children try the following problem.

Which number is shown with the blocks?

- A. 710 B. 701 C. 170



Try It! 20 minutes | Pairs

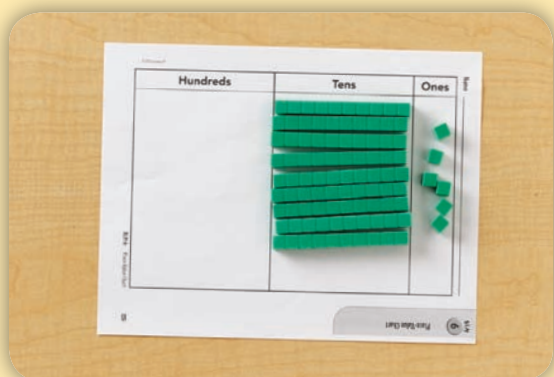
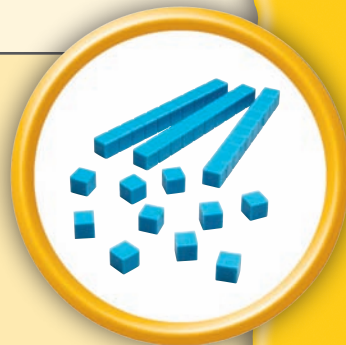
Here is a problem about place value in three-digit numbers.

Nate collects trading cards. He had 96 trading cards. Then he bought another pack of 10 cards. How many trading cards does Nate have now?

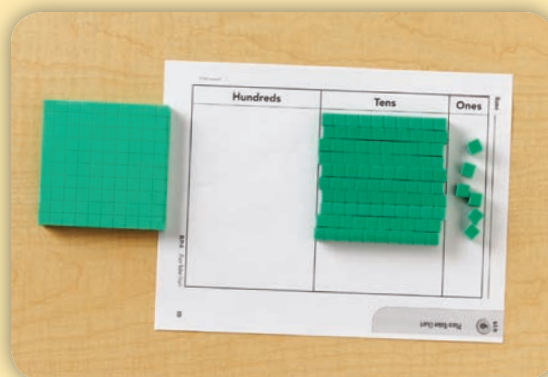
Introduce the problem. Then have children do the activity to solve the problem. Distribute Base Ten Blocks and a Place-Value Chart (BLM 6) to children.

Materials

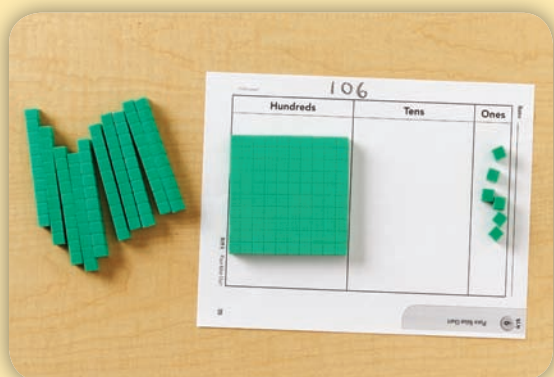
- Base Ten Blocks (5 flats, 20 rods, and 10 units per pair)
- Place-Value Chart (BLM 6; 1 per pair)
- pencils (1 per pair)



1. Say: Nate had 96 trading cards. **Ask:** How can you show 96 using Base Ten Blocks? How many tens are in 96? How many ones are in 96? Have children count out 9 rods and 6 units and place them in the Tens and Ones columns on their charts.



2. Say: Nate bought another pack of 10 cards. **Ask:** What should you add to your blocks to show the new pack of 10? How many rods do you have now? **Say:** Push your 10 rods together and compare them to a hundred flat. Elicit that the 10 rods are the same as a flat.



3. Have children exchange 10 rods for one flat and place the flat in the Hundreds column of their chart. **Ask:** How many flats do you have? How many rods do you have? How many units do you have? **Say:** We can write this number as 1 hundred, 0 tens, 6 ones.

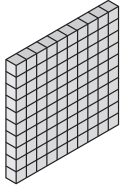
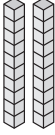
Look Out!

Watch for children who aren't making the connection between the sizes of the Base Ten Blocks and the place-value positions in the numbers. Remind them that the bigger blocks go on the left and that the blocks get smaller going to the right, just like the numbers when we read them.

Use Base Ten Blocks. Build each number.

Write the number. (Check students' work.)

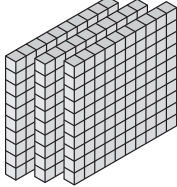
1.

Hundreds	Tens	Ones
		

1 hundreds 2 tens

2 ones

2.

Hundreds	Tens	Ones
		

3 hundreds 0 tens

0 ones

Use Base Ten Blocks. Build each number. Draw the model. Write the number.

3. 235

Hundreds	Tens	Ones

2 hundreds 3 tens

5 ones

4. 203

Hundreds	Tens	Ones

2 hundreds 0 tens

3 ones

Write the number.

5. 7 hundreds 8 tens 4 ones 784

Answer Key

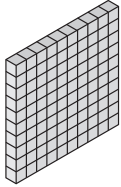
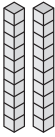
Challenge! The library had 850 books. They bought 100 more books. How many books does the library have now? Use Base Ten Blocks. Build the numbers. Draw the blocks. Write how many in all.

Challenge: Drawing should show 8 flats and 5 rods for 850 and 1 flat for 100; 950 books.

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**Use Base Ten Blocks. Build each number.
Write the number.**

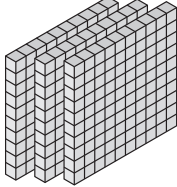
1.

Hundreds	Tens	Ones
		

_____ hundreds _____ tens

_____ ones

2.

Hundreds	Tens	Ones
		

_____ hundreds _____ tens

_____ ones

Use Base Ten Blocks. Build each number. Draw the model. Write the number.

3. 235

Hundreds	Tens	Ones

_____ hundreds _____ tens

_____ ones

4. 203

Hundreds	Tens	Ones

_____ hundreds _____ tens

_____ ones

Write the number.

5. 7 hundreds 8 tens 4 ones _____

Name _____

Challenge! The library had 850 books. They bought 100 more books. How many books does the library have now? Use Base Ten Blocks. Build the numbers. Draw the blocks. Write how many in all.

Name _____

Ones	Tens	Hundreds